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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,734

03/23/2004

Andreas Loew

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EXAMINER

RASHID, DAVID

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

01/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/806,734

Applicant(s)

LOEW, ANDREAS

Examiner

David P. Rashid

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/2007 has been entered.

Amendments

2. This office action is responsive to the claim amendment received on 10/18/2007. **Claims 15 – 20** remain pending.

Claim Rejections - 35 USC § 112

3. In response to applicant's claim 35 USC § 112 rejections amendments and remarks received on 10/18/2007, the previous claim 35 USC § 112 rejections are withdrawn.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 15 recites the limitation "the output image" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. The USPTO “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” (Official Gazette notice of 22 November 2005), Section IV.C, reads as follows:

While abstract ideas, natural phenomena, and laws of nature are not eligible for patenting, methods and products employing abstract ideas, natural phenomena, and laws of nature to perform a real-world function may well be. In evaluating whether a claim meets the requirements of section 101, the claim must be considered as a whole to determine whether it is for a particular application of an abstract idea, natural phenomenon, or law of nature, rather than for the abstract idea, natural phenomenon, or law of nature itself.

For claims including such excluded subject matter to be eligible, the claim must be for a practical application of the abstract idea, law of nature, or natural phenomenon. *Diehr*, 450 U.S. at 187, 209 USPQ at 8 (“application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”); *Benson*, 409 U.S. at 71, 175 USPQ at 676 (rejecting formula claim because it “has no substantial practical application”).

To satisfy section 101 requirements, the claim must be for a practical application of the Sec. 101 judicial exception, which can be identified in various ways:

The claimed invention “transforms” an article or physical object to a different state or thing.

The claimed invention otherwise produces a useful, concrete and tangible result, based on the factors discussed below.

8. **Claims 15-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 15-20 recite the mere manipulation of data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application. A practical application exists if the result of the claimed invention is “useful, concrete and tangible” (with the emphasis on “result”)(Guidelines, section IV.C.2.b). A “useful” result is one that satisfies the utility requirement of section 101, a “concrete” result is one that is “repeatable” or “predictable”, and a “tangible” result is one that is “real”, or “real-world”, as opposed to “abstract” (Guidelines, section IV.C.2.b)). Claims 15-20 merely manipulate data without ever producing a useful, concrete and tangible result.

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Claims 15-20 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter because the claimed invention is directed to a judicial exception and is not directed to a practical application of such judicial exception (though the claims produce what is considered a useful and concrete result, the claims do not require any physical transformation and the invention does not produce a tangible result).

MPEP SECTION 2106 (IV)(C)(2)(b)(2) titled “TANGIBLE RESULT” reads as follows:

...the tangible requirement does require that the claim must recite more than a 35 U.S.C. 101 judicial exception, in that the process claim must set forth a practical application of that judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

and MPEP SECTION 2106 (II)(C) reads as follows:

As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) “adapted to” or “adapted for” clauses,
- (C) “wherein” clauses, or
- (D) “whereby” clauses.

For example, the method of independent claim 1 is directed to the actions of “distributing a number of support points...”, “selecting or calculating a pixel or subpixel...”, and “distributing the support points...” which could all be done on a hardware implementation free from any “real-world result” as there could be no real-world application. The “distributing a number of support points” step of claim 1 includes an output image as does the preamble include an input image; however, both images may also be intangible when only residing within a computer. Claims 18-20 do not relieve in intangibility of claims 15-18.

In order to for the claimed product to produce a “useful, concrete and tangible” result, recitation of one or more of the following elements is suggested:

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- The manipulation of data that represents a physical object or activity transformed from outside the computer.
- A physical transformations outside the computer, for example in the form of pre or post computer processing activity.
- A direct recitation of a practical application;

Applicant is also advised to provide a written explanation of how and why the claimed invention (either as currently recited or as amended) produces a useful, concrete and tangible result.

Response to Arguments

9. Applicant's arguments and amendments filed on 10/18/2007 with respect to **claims 15-20** have been respectfully and fully considered, and are persuasive.

Summary of Remarks regarding claim 15:

Applicant argues simply applying Gove et al. for scaling of a video image that consists of pixels arranged in a matrix could lead to an undesirable sampling at the border between two pixels, depending on the number of pixels per line/column in the input image and the number of elements in a line/column of the SLM. In fact, Gove et al. is not related to scaling of a video image from a first matrix size to a second matrix size, but merely with matching an analog video image onto an SLM staggered arrangement of elements. The person of ordinary skill in the art would, therefore, not consider Gove et al. when trying to find a solution to the scaling problem (*@ response page 7*).

The mere fact that staggered pixel displays may have a perceived better horizontal resolution would not automatically lead the person skilled in the art to apply staggered pixels in a scaling method. Information that has been lost in a prior scaling step can not be displayed, irrespective of the type of display. Applicant's claimed scaling method is not dependent on a certain type of display or

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properties thereof. Further, the claimed invention is not directed to improving display of fine details in a video signal, but rather to a scaling method that prevents fine details from being lost in scaling for matrix display. Alleging that the person skilled in the art would use Gove et al. in combination with Scott only because staggered pixel pattern are known appears to be based on improper hindsight driven by the desire to produce obviousness over arbitrary prior art. In view of the above discussion, applicant respectfully requests withdrawal of the 35 U.S.C. 103(a) rejection of claim 15 (*@ response pages 8-9*).

Examiners Response regarding claim 15:

Applicant's arguments and amendments with respect to claim 15 have been fully considered and are persuasive. The rejection of claim 15 has been withdrawn.

Summary of Remarks regarding claims 16 and 17:

Applicant argues as discussed above, claim 15 patentably distinguishes over Scott et al. in view of Gove et al. Jung is not related to scaling, whereas the invention is directed to scaling. The mere fact that Jung teaches the step of determining a maximum difference for deciding whether to apply filtering or not does not automatically lead a person of ordinary skill in the art to consider the teaching of Jung in a method for scaling.

Claim 17 depends from claim 15 and therefore patentably distinguishes over the art of record for the same reasons as claim 15.

In summary, the prior art clearly fails to mention or suggest the problem of fine details disappearing when support points are selected at regular distances reoccurring across successive lines or columns. Therefore the principles as claimed in amended claim 15 and those that depend therefrom are patentable in view of the cited art (*@ response pages 9-10*).

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Examiners Response regarding claims 16 and 17:


Applicant's arguments and amendments with respect to claims 16 and 17 have been fully considered and are persuasive. The rejection of claims 16 and 17 has been withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



VIKKRAM BALI
PRIMARY EXAMINER

/David P. Rashid/
Examiner, Art Unit 2624

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Examiner
Art Unit 2624